

What is claimed is:

1. A method for forming a metal oxide film comprising, when a metal oxide film is formed by conducting a thermal treatment on a coating film containing an organic metal compound formed on an inner wall of a tube, performing an ultraviolet irradiation treatment or an ozone treatment on the coating film prior to or simultaneously with the thermal treatment.
2. The method for forming a metal oxide film of claim 1, wherein the ultraviolet irradiation treatment or the ozone treatment is preformed prior to the thermal treatment and simultaneously with a drying process of the coating film.
3. The method for forming a metal oxide film of claim 1, wherein the ultraviolet irradiation treatment is executed via a mask of a predetermined pattern.
4. The method for forming a metal oxide film of claim 1, wherein the tube has the size of the opening in the range of 0.5 to 2 mm and the length in the range of 30 cm to 3 m.
5. A method for forming a secondary electron emission film of a gas discharge tube comprising, when a secondary electron emission film formed of a metal oxide film is formed by conducting a thermal treatment on a coating film containing an organic metal compound

formed on an inner wall of a glass tube, performing an ultraviolet irradiation treatment or an ozone treatment on the coating film prior to or simultaneously with the thermal treatment,

wherein the glass tube is an elongated glass tube having an
5 inner diameter of not more than 2 mm.